Selected Census Projects

- Malawi Census 2008:
  - 6 Million forms, 6 PS900 Scanners, software, training

- Sudan Census 2008:
  - 11 Million forms, 12 PS900 Scanners, software, training

- Ethiopia census 2007:
  - 23 Million DRS booklets Supplied, 11 PS900 Scanners, Software, training

- Sudan Pilot census 2007:
  - Scanners, forms, software, training
Selected Census Projects (cont.)

• Nigeria census 2006:
  – more than 50 million DRS booklets supplied (100 million sheets >600 tonnes of forms)

• Cameroon Census 2003 – Supply of 6 Million Census booklets

• Tanzania Census 2002 – 18 Scanners, forms, software, training

• Bangladesh Census 2000 – Scanners, training, software

• Zambia Census 2000 – Scanners, forms, software, training

• Australia Census 1996 – DRS OMR Scanners
### PART 1: POPULATION CENSUS

*Note: Questions with asterisk (*) should be asked using interviewing chart*

<table>
<thead>
<tr>
<th>QUESTION</th>
<th>PERSON 1</th>
<th>PERSON 2</th>
<th>PERSON 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1*. Please, give me the full name of each person actually residing in the household, beginning with the head of household?</td>
<td>(In capital letters)</td>
<td>(In capital letters)</td>
<td>(In capital letters)</td>
</tr>
<tr>
<td>2. What is the relationship of (NAME) head?</td>
<td>HEAD OF HH ....................................1</td>
<td>SPouse ........................................2</td>
<td>SPouse ........................................2</td>
</tr>
<tr>
<td></td>
<td>SPouse ........................................2</td>
<td>SOn/ Daughter ................................3</td>
<td>SOn/ Daughter ................................3</td>
</tr>
<tr>
<td></td>
<td>PARENT ..........................................4</td>
<td>PARENT ..........................................4</td>
<td>PARENT ..........................................4</td>
</tr>
<tr>
<td></td>
<td>OTHERS ...........................................5</td>
<td>OTHERS ...........................................5</td>
<td>OTHERS ...........................................5</td>
</tr>
<tr>
<td>3. Is (NAME) male or female?</td>
<td>MALE ............................................1</td>
<td>FEMALE ...........................................2</td>
<td>MALE ............................................1</td>
</tr>
<tr>
<td></td>
<td>FEMALE ...........................................2</td>
<td>MALE ............................................1</td>
<td>FEMALE ...........................................2</td>
</tr>
<tr>
<td>4*. What solar calendar month and year was (NAME) born?</td>
<td>MONTH ...........................................1</td>
<td>MONTH ...........................................1</td>
<td>MONTH ...........................................1</td>
</tr>
<tr>
<td></td>
<td>YEAR .............................................1</td>
<td>YEAR .............................................1</td>
<td>YEAR .............................................1</td>
</tr>
<tr>
<td>5. What ethnic group is (NAME) belonging to?</td>
<td>(Specify)</td>
<td>(Specify)</td>
<td>(Specify)</td>
</tr>
<tr>
<td>6. a. Is (NAME) following any religion?</td>
<td>a) YES ........................................1</td>
<td>a) YES ........................................1</td>
<td>a) YES ........................................1</td>
</tr>
<tr>
<td>• If yes, what is that religion?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Specify)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. b. If the answer in Q. 6. a is one of the following 6 religions, further ask:</td>
<td>(Specify)</td>
<td>(Specify)</td>
<td>(Specify)</td>
</tr>
<tr>
<td>1. Budish: To have been accepted?</td>
<td>NO .............................................2</td>
<td>NO .............................................2</td>
<td>NO .............................................2</td>
</tr>
<tr>
<td>2. Catholics: To have been accepted?</td>
<td>(Q.7) →</td>
<td>(Q.7) →</td>
<td>(Q.7) →</td>
</tr>
<tr>
<td>3. Protestantism: To have been accepted?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Muslim: To have been accepted?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Cao Có: To have been accepted?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Hsipă hfo: To have been accepted?</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**PART 1: POPULATION INFORMATION**

1. Please indicate full names of regular residents in the household, starting with the host.

   - SURVEYOR
   - HEAD SURVEYOR

2. How is [NAME] related to the host?

   - HOST
   - WIFE/HUSBAND
   - CHILD
   - GRANDCHILD
   - OTHERS

3. Is [NAME] male or female?

   - MALE
   - FEMALE

4. What is [NAME]'s date of birth according to solar calendar?

   - MONTH
   - YEAR
   - YEAR NOT IDENTIFIED

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**CONFIRMED AND SIGNED**

- FULL NAME
- SIGNATURE
- INFORMATION PROVIDER
- FULL NAME
- SIGNATURE
- SURVEYOR
- FULL NAME
- SIGNATURE
- HEAD SURVEYOR
DRS scanners – PS960

Potential Scanning Speed:
Up to 10,500 double sided forms per hour

Full Image + OMR Data

Integrated PC

Desktop device

Manufactured by DRS

Images produced compatible with all ICR software
Census Options for Data Capture from Forms

1. Manual Entry
   - Batch of Census Forms
   - CSPro Batch/Data Entry PC
   - Good Data

2. Key from Image
   - Batch of Census Forms
   - Document Scanner
   - Images
   - Off Shore Keying?
   - Data Import
   - CSPro Batch/Data Entry PC
   - Good Data

3. Optical Mark Reading (OMR)
   - Batch of Census Forms
   - OMR Scanner
   - Data
   - Data Import
   - Manual Entry
   - CSPro Batch/Data Entry PC
   - Good Data

4. Intelligent Character Recognition (ICR)
   - Batch of Census Forms
   - Document Scanner
   - Images
   - Scanned ok
   - Storage
   - iCR Server
   - Key Correction PC
   - Data Import
   - CSPro Batch/Data Entry PC
   - Good Data

5. OMR, ICR & Image
   - Batch of Census Forms
   - OMR & Image Scanner
   - Data
   - Data Import
   - Key Correction PC
   - iCR Server
   - Data Import
   - CSPro Batch/Data Entry PC
   - Good Data
DRS GPS Device

DRS Cense

Compatible with all GIS software
Low Cost
Single button operation
Lots of uses
### Enumerator’s Clipboard

#### Population Census Organization

**Housing and Population Census 2008**

<table>
<thead>
<tr>
<th>Field</th>
<th>Content</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>12345678</td>
</tr>
<tr>
<td>2</td>
<td>- 45 29 678</td>
</tr>
<tr>
<td>3</td>
<td>+ 102 27345</td>
</tr>
</tbody>
</table>

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**Signature of Respondent**

**Name of Respondent**
Single Housing Unit
GIS data dissemination partnership

- Feb 2009 agreement signed - **Space Time Research (STR)**
- DRS output provides for STR input
Malawi (Population: 12M)
2008 Census images

DRS Supplied:

6 Million forms, 6 PS900 Scanners, software, training
Malawi Census 2008

- Approx. 12,000 EA areas
- Registered all in-coming batches before scanning
- Ran 2 x 8 hour shifts/day
- 3 Months of scanning (Aug-Oct 08)
- 2Tb Storage Server for images of all 6 million forms
- Archive/retrieval software
- Remote software support via Internet
- Data export to CS-Pro
Other Large Scale Projects

- **London Mayoral, Assembly & European elections (2000 & 2004)**
  - **292** x PS900 scanners supplied 13 Sites across London
  - Over 10 Million ballots printed (Approx 5 Million voters)
  - Servers, PC’s, projectors
  - Scanning staff, support staff, Site managers
  - 10 Hours to produce results

- **Scottish National and Local Elections (2007)**
  - Approx 5 Million voters
  - **320** x PS900 Scanners on 32 Sites
  - Servers, PC’s, projectors
  - Scanning staff, support staff, Site managers
  - 10 Hours to produce results
London Elections and Scottish Elections
Over 300 DRS scanners used counting
over 1 million ballots/hour
Other Large Scale Projects

  - 59 x PS900 Scanners
  - 500,000 Ballot Papers (With full colour photos)
Summary

• Happy to provide any part of a census solution
• Happy to work with other technology partners
• Products that integrate
• Nice people to deal with!
Thanks

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